

NATIONAL ACADEMY OF SCIENCES  
COMMITTEE ON INTERNATIONAL SECURITY AND ARMS CONTROL  
2101 Constitution Avenue Washington, D.C. 20418

May 11, 1994

TO: Participants in the May 13th Planning Meeting on Biological Weapons Conversion Assistance

-- CISAC BW Working Group (Lederberg, Chanock, Meselson, Monath, Shelokov, Steinbruner)  
-- D.A. Henderson, HHS  
-- John Robbins, NIH  
-- Joseph McDade, CDC

FROM: Jo Husbands, Director, CISAC

SUBJECT: Background and Plans for the Meeting

The enclosed memo provides describes the background and goals of the meeting on Friday. An updated agenda is included as well. By the end of our discussions, we want to have the basis for preparing a proposal that will be considered by an interagency working group in mid-May. The proposal would then be presented to a trilateral U.S.-British-Russian meeting in June. If all goes well, the proposed initiative will be on the agenda for the June meeting of the commission created by Vice President Gore and Russian Premier Chernomyrdin to work on important problems in science and technology.

We very much appreciate your willingness to help us take advantage of this important opportunity.

**NOTE:** Visitor parking is available at the Academy on a first-come, first-served basis; it is not possible to reserve space. The entrance to the parking lot is on 21st Street N.W., just around the corner from C Street (pull up to the barrier and tell the guard via the speakerphone that you are here for a meeting in the Board Room). The nearest commercial garage is several blocks away at 23rd and I Streets in the Columbia Plaza shopping center, or we are a 10+-minute walk from the Foggy Bottom Metro station. There are entrances to the building on both Constitution Avenue and C Street.

**P.S.** There will be concert Friday evening at 8:00 p.m. in the auditorium of the Academy. The concert, which is being jointly sponsored with the Library of Congress, will feature the Quintette Pro Arte. The program will be: Borodin, Piano Quintet in C Minor; Granadaos, Piano Quintet in G Minor; and Shostakovich, Piano Quintet, Op. 57. Seating is normally on a first-come, first-served basis, but if we let them know by 5 p.m., the organizers will save seats until 7:45 p.m.

## DRAFT AGENDA

Working Group on Biological Weapons Control  
Planning Meeting  
Board Room, National Academy of Sciences  
2101 Constitution Avenue N.W.

May 13, 1994

- 9:30 Continental breakfast available, Executive Dining Room
- 10:00 Executive Session
  - updates
  - status of potential assistance for BW conversion (guest: D.A. Henderson)
- 11:00 Options for BW conversion assistance projects
  - introductory remarks: Joshua Lederberg, D.A. Henderson
  - status of potential assistance for BW conversion
- 1:00 Working lunch, Executive Dining Room
- 2:00 Other potential projects, next steps for BW Working Group
- 3:00 Break
- 3:30 Briefing for Congressional staff on BW issues
  - presentation of forthcoming Meselson et al. article in Nature
- 5:00 Adjourn

Guests for the conversion assistance planning session, 11:00 a.m. - 2:00 p.m.:

Donald A. Henderson, Deputy Assistant Secretary for Health and Science, Public Health Service, Department of Health and Human Services

Joseph McDade, Associate Director for Laboratory Science, National Center for Infectious Diseases, Centers for Disease Control and Prevention

John Robbins, Chief, Laboratory of Developmental and Molecular Immunity, Division of Intramural Research, National Institute of Child Health and Human Development

## ASSISTANCE FOR BW-RELATED CONVERSION

### BACKGROUND AND GOALS OF THE MEETING

Until recently, U.S. assistance for defense-related conversion in the former Soviet Union has been confined to projects covering nuclear and chemical weapons, although the Nunn-Lugar legislation includes potential assistance for BW facilities and personnel. (The exception was an offer to assist with the destruction of facilities.)

There has now been a high level decision to develop a new initiative that would offer assistance for (1) reviving vaccine production in the FSU and (2) converting facilities and personnel formerly engaged in BW-related research to peaceful work that can benefit public health in Russia and the U.S. The projected funding level is \$50 million for 5 years, of which \$15-20 million is expected to go to the vaccine program.

D.A. Henderson, Deputy Assistant Secretary for Health and Science, has been given the task of developing the initiative, and he has asked the Working Group on Biological Weapons Control of the National Academy of Sciences' Committee on International Security and Arms Control to convene a planning meeting to help with that process.

Specifically, a proposal is needed for the second part of the initiative, the conversion assistance. The entire proposal will be reviewed at an interagency working group meeting in late May and then presented at a trilateral U.S.-British-Russian working group meeting in June. If all goes well, it will be part of the agenda for the Gore-Chernomyrdin meetings in late June.

The goal of the planning meeting on May 13th is to develop a conceptual framework for conversion assistance, to identify how best to engage the scientific community in Russia and the United States in this effort. Potential projects that could be part of this program, as well as the mechanisms for them (individual grants, laboratory-to-laboratory linkages), must be identified and fleshed out, including a rough cost estimate. The results of the meeting will provide the basis for preparing the proposal to the interagency working group.

### THE SITUATION IN RUSSIA

There appear to have been three types of BW-related research in the former Soviet Union, each of which will require different conversion strategies.

- 1) Institutes of the Russian Academies of Science and Medicine received funds from the Ministry of Defense for basic research with potential relevance to BW. In theory, these facilities and personnel are being assisted by both public and private efforts to preserve the basic scientific capabilities of the former Soviet Union, but there are serious shortfalls and significant research capacity is being lost.

2) At the other extreme, the military operated highly secret programs for both offensive and defensive BW. As yet the U.S. has only limited knowledge about these activities and it will probably require military-to-military contacts to achieve greater transparency. These facilities are not promising targets for assistance programs at this time.

3) The third group of facilities were clearly engaged in work for the military on dangerous strains with potential BW applications, and were at least marginally involved in their militarization. The Biopreparat complex is a typical facility in this third category. Significant progress could be made in converting these facilities, and this would be the focus of the proposed initiative.

## POTENTIAL PROJECTS

Conversion assistance projects should:

1) provide genuine public health benefits to Russia, and if possible the United States, by making use of existing skills and knowledge for peaceful rather than military purposes;

2) conserve existing facilities and capabilities, while creating means to ensure openness and transparency. These means include:

a) establishing a continuing Western presence in these facilities as a reassurance that the conversion to peaceful work continues, and enable Russian scientists to work in Western facilities as a means of building networks. (It may also be desirable to tie former BW researchers to the broader Russian science community.)

b) establishing an expectation of openness about past activities as a quid pro quo for assistance, not for the purpose of recrimination, but in order to understand the past so that it can be transcended.

3) take advantage of Russian strengths and experience, and retain their expertise in scientific fields with which they are most familiar.

The scale of projects could range from grants to individual scientists to laboratory-to-laboratory contacts, to more ambitious support for particular Russian facilities. In some cases, support might include the provision of equipment.

### Example #1: Research and Monitoring for Global Public Health

Tom Monath has suggested targeting the conversion assistance to make positive use of the experience Russian scientists have gained in their BW-related work on dangerous strains. Beyond their possible BW applications, these diseases are significant public health threats in many parts of the world. But their distribution is regional or localized, their natural incidence is low, and the populations they affect cannot afford vaccines or other interventions. Research on the prevention and control of these diseases has been exclusively

within the purview of government agencies concerned; there is no commercial market and hence no private interest in work on these agents.

An opportunity thus exists to use conversion to redirect the knowledge from BW-related research to activities that would promote public health, global surveillance, and readiness. The deficiencies in the world's present capabilities to meet the threats posed by emerging and reemerging infectious diseases have been repeatedly emphasized, for example, in the recent Institute of Medicine report, Emerging Infections. The Russian scientists could be brought into the new American and international effort sparked by the IOM report, with CDC in the U.S. and the WHO as key contacts. NIH and Ft. Dietrick might be important institutional partners as well.

Examples of some of the existing diseases that might be subjects for this cooperative work include hantavirus and broader classes of hemorrhagic fevers; tick-borne encephalitis; and brucellosis. Potential emerging disease threats include ebola virus disease. Beyond this, cooperative research could be supported for high-profile diseases, such as anthrax, plague, and tularemia, which figure in most lists of potential BW agents.

The funded and cooperative research could include development of improved rapid and early diagnostic tests and reagents; development of vaccines, antimicrobial and antiviral drugs; investigation of disease outbreaks at the request of national and international agencies; and development of information and reporting networks.

Clearly this is a broad agenda, from which many specific projects could be developed.

#### **Example #2: Archeo-virology**

When the BW Working Group met in Moscow in mid-April with its counterpart group from the Russian Academy of Sciences, one of the participants was Lev Sandakhchiev, Director of NPO "Vector," the Biopreparat facility in Novosibirsk. Sandakhchiev reported that scientists from his institute had been doing "archeo-virology" on bodies, most about 100 years old, found preserved in the permafrost. The burial sites lay in an area that is being explored for oil and natural gas, and the Russian government was concerned about threats of infection from the old graves. Twelve burial sites have been found to date. Most of the bodies recovered so far had been victims of smallpox.

These discoveries provide an exciting opportunity to compare old and new strains of diseases. For example, it would be very important if a victim of the 1918-19 flu epidemic could be found. Work on anthrax is another possibility. NPO Vector is very interested in joint research to support these endeavors and has proposed that all the work on these bodies should be handled under an open regime, with appropriate transparency.